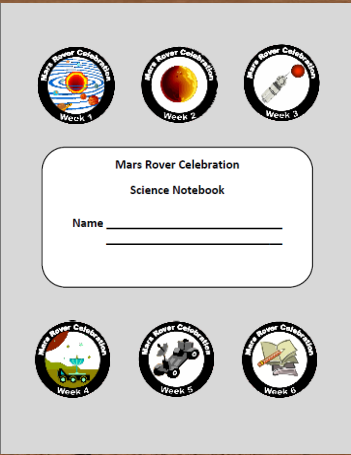


Today you will be working to build your team's prototype of your Mars Rover. As you work, reminders will be displayed on the screen so that your team can be sure to include all of the necessary elements in your prototype.

Teacher: This presentation is designed to play in a loop, providing students reminders as they work to build their rovers.

Slide 2

Use your Science Notebook to guide you through the building of your prototype.



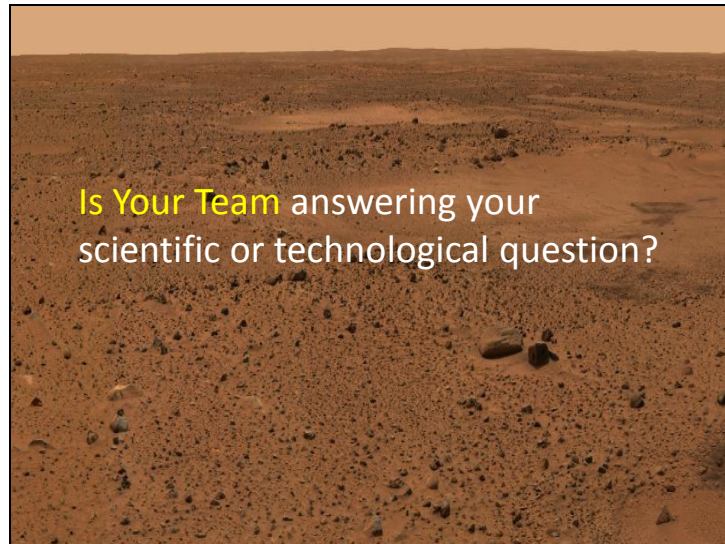
The notebook cover features a central white box with the text "Mars Rover Celebration Science Notebook" and a "Name" field. It is surrounded by six circular icons representing different weeks of the celebration, each with a unique illustration related to Mars exploration.

Mars Rover Celebration
Science Notebook

Name _____

Mars Rover Celebration Week 1
Mars Rover Celebration Week 2
Mars Rover Celebration Week 3
Mars Rover Celebration Week 4
Mars Rover Celebration Week 5
Mars Rover Celebration Week 6

Slide 3



Slide 4

Use your sketches
of your rover to
help you build it.

Lesson 11: Brainstorm and Preliminary Design

Exploration Activity:

Work with your team to draw a sketch of what your rover will look like. Be sure to keep your mission in mind. Tape or staple extra pages into your Science Notebook as needed.

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Slide 5

Focus on the question that your team will answer.

Lesson 7: How Do I Measure This?

Engagement Questions:

Why?

Why?

How?

Engagement:

What scientific or technological question will your team answer? (Go back through your Science Notebook and copy it from Lesson 6.)

Our Team's Question: _____

Now, think about the experiment that you conducted and how you measured the craters to help answer this question.

What things will you measure with your own rover experiment:

1. _____
2. _____
3. _____

List three ways you and your team will take these measurements in your own experiment?

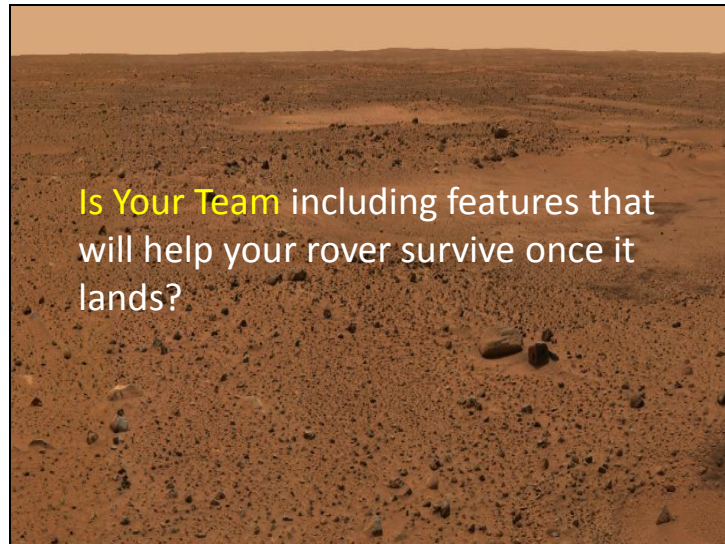
1. _____
2. _____
3. _____

Evaluation:

Why are taking accurate measurements critical to your Mars rover mission? _____

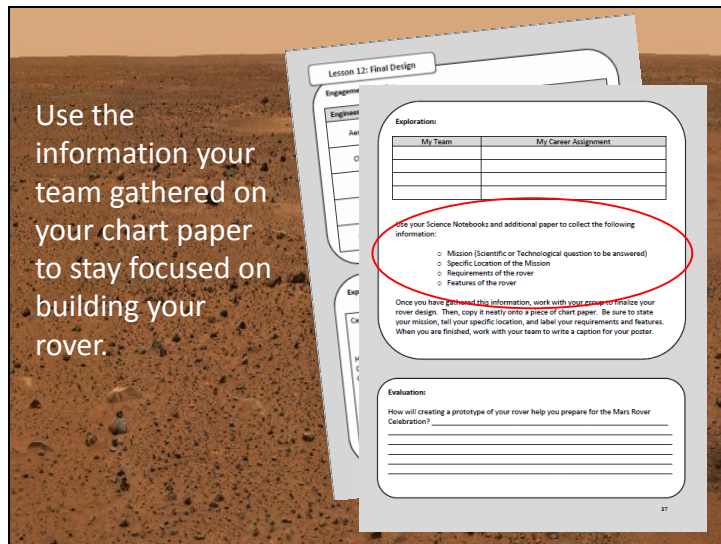
20

Slide 6



Slide 7

Use the information your team gathered on your chart paper to stay focused on building your rover.



Lesson 12: Final Design

Engagement

Exploration

My Team	My Career Assignment

Use your Science Notebooks and additional paper to collect the following information:

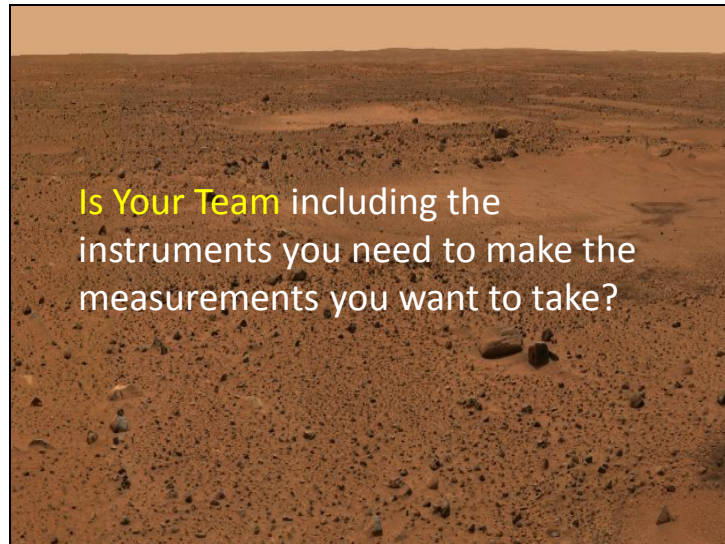
- Mission (Scientific or Technological question to be answered)
- Specific Location of the Mission
- Requirements of the rover
- Features of the rover

Once you have gathered this information, work with your team to finalize your rover design. Then, copy it neatly onto a piece of chart paper. Be sure to state your mission, tell your specific location, and label your requirements and features. When you are finished, work with your team to write a caption for your poster.

Evaluation

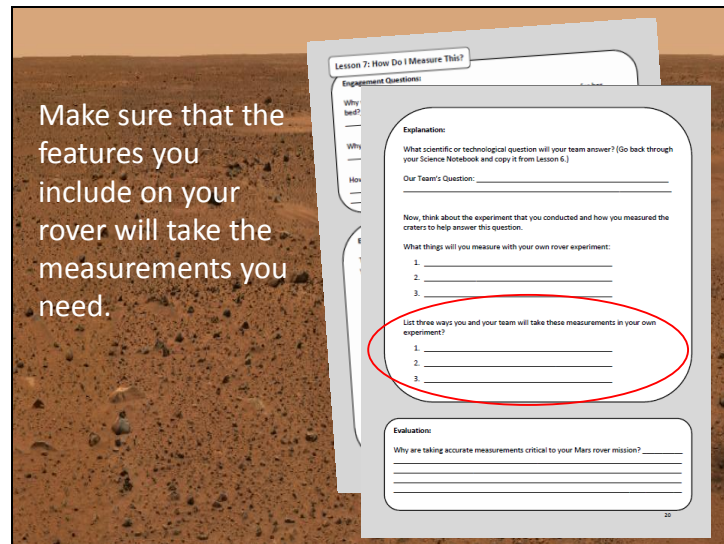
How will creating a prototype of your rover help you prepare for the Mars Rover Celebration?

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Slide 9

Make sure that the features you include on your rover will take the measurements you need.



Lesson 7: How Do I Measure This?

Engagement Questions:

Why? _____
How? _____

Explanation:

What scientific or technological question will your team answer? (Go back through your Science Notebook and copy it from Lesson 6.) _____

Our Team's Question: _____

Now, think about the experiment that you conducted and how you measured the craters to help answer this question.

What things will you measure with your own rover experiment:

1. _____
2. _____
3. _____

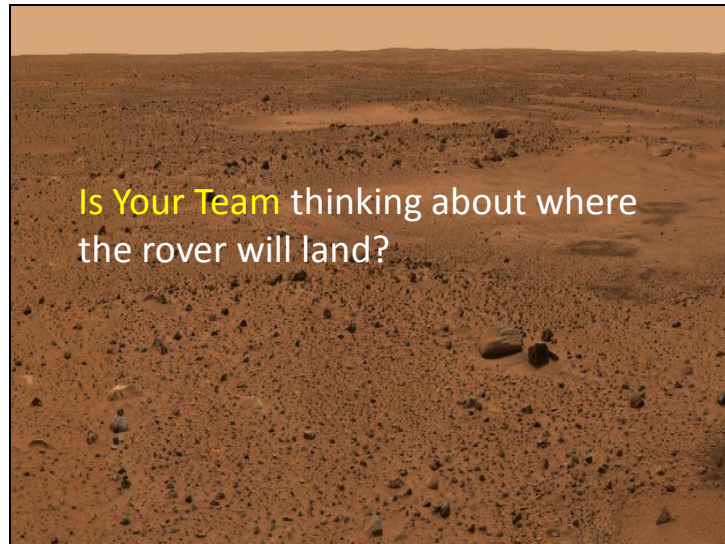
List three ways you and your team will take these measurements in your own experiment?

1. _____
2. _____
3. _____

Evaluation:

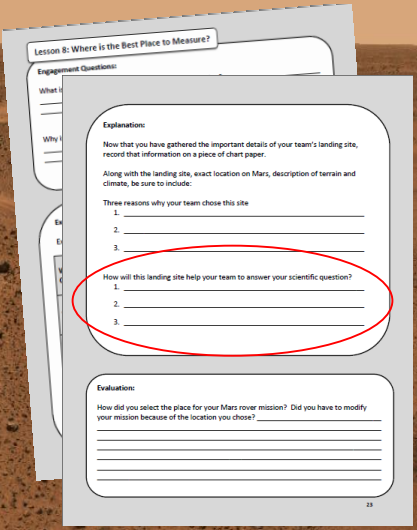
Why are taking accurate measurements critical to your Mars rover mission? _____

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Slide 11

Consider where your rover will land when you build it.



Lesson 8: Where is the Best Place to Measure?

Engagement Questions:

What is ...

Why ...

Ex ...

Explanations:

Now that you have gathered the important details of your team's landing site, record that information on a piece of chart paper.

Along with the landing site, exact location on Mars, description of terrain and climate, be sure to include:

Three reasons why your team chose this site

1. _____
2. _____
3. _____

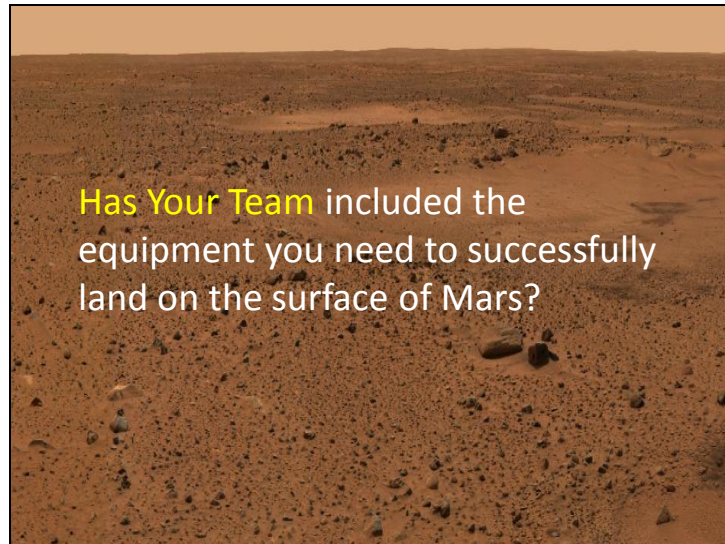
How will this landing site help your team to answer your scientific question?

1. _____
2. _____
3. _____

Evaluations:

How did you select the place for your Mars rover mission? Did you have to modify your mission because of the location you chose? _____

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Slide 13

Consider your landing strategy when you build your rover.

Lesson 10: Landing, Moving and Surviving

Exploration Cont.

How My Strategy Can be Successful	How My Strategy Can be Problematic

The Landing Strategy my team decided to use: _____

We picked this landing strategy because:

1. _____
2. _____
3. _____

Next, work with your team to decide how your rover will move around once it lands on Mars. _____

Slide 14

Use your characteristics of a successful team to help you work collaboratively.

Lesson 13: Construct Mock-Up

Engagement Activity:

Characteristics of a Successful...			
Engineer	Scientist	Designer	Project Manager

Evaluation:

How does assigning a different job to each member of your team (designer, scientist, project manager, engineer) help you to complete your Mars rover mission?

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